To: Narvaez, Madonna[Narvaez.Madonna@epa.gov]; McClintock,

Katie[McClintock.Katie@epa.gov]

Cc: Doolan, Stephanie[Doolan.Stephanie@epa.gov]; Fairchild, Susan[Fairchild.Susan@epa.gov]

From: Johnson, Steffan

Sent: Mon 2/22/2016 12:41:24 PM
Subject: RE: Meeting with Bullseye Glass

Katie and Madonna,

Some thoughts after Friday's phone call.

Particulate from glass furnaces typically consists of very fine particles, largely PM-10 and finer. Metals are likely to be emitted as a fume and will likely be PM 2.5 and finer. Baghouse controls for such a fume would be effective if the baghouse were a cartridge type (usually smaller), but likely not a reverse-air type baghouse (usually larger). The key with a baghouse is that the incoming gas stream needs to be fairly cool, compared to the furnace; on the order of 350 deg.F and less

Such fine particulate is also very good at creating opacity. Do you know if any opacity readings have been done at Bullseye? I am just curious if visible emissions are obvious there; that would indicate a need to install controls, and may serve as confirmation that such controls are effective. Fine particulate has much more surface area than larger particulate, so it occludes more sunlight and, ergo, creates higher opacity.

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

Please let me know if you have additional questions,

Stef

From: Narvaez, Madonna

Sent: Friday, February 19, 2016 2:41 PM

To: McClintock, Katie < McClintock. Katie@epa.gov >; Johnson, Steffan

<johnson.steffan@epa.gov>

Cc: Doolan, Stephanie < Doolan. Stephanie@epa.gov>

Subject: RE: Meeting with Bullseye Glass

Also, there is a chrome plater in the area, but they don't use cadmium and appear to be well controlled.

From: McClintock, Katie

Sent: Friday, February 19, 2016 11:34 AM

To: Johnson, Steffan < johnson.steffan@epa.gov>

Cc: Doolan, Stephanie < Doolan. Stephanie@epa.gov>; Narvaez, Madonna

<Narvaez.Madonna@epa.gov>

Subject: RE: Meeting with Bullseye Glass

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

From: Johnson, Steffan **Sent:** Friday, February 19, 2016 11:21 AM To: McClintock, Katie < McClintock.Katie@epa.gov > Cc: Doolan, Stephanie < Doolan. Stephanie@epa.gov>; Narvaez, Madonna <Narvaez.Madonna@epa.gov> Subject: Re: Meeting with Bullseye Glass Thank you! Sent from my iPhone On Feb 19, 2016, at 2:20 PM, McClintock, Katie < McClintock. Katie@epa.gov > wrote: Amended call in number and presentation for our call at 2. From: Hunter, Jeffrey (Perkins Coie) [mailto:JHunter@perkinscoie.com] **Sent:** Friday, February 19, 2016 11:10 AM To: McClintock, Katie < McClintock. Katie@epa.gov > Cc: Garrahan Paul < Paul. Garrahan@doj.state.or.us > Subject: Re: Meeting with Bullseye Glass Katie: I just left a message. In order for the folks on the phone to see the slides, we need to set up a live video link. Below is the information.

Please note there is a different call-in number. I do not know who from EPA is attending so please circulate.

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Ex. 6 - Personal Privacy Alternate number)

2) Enter Conference ID: Ex. 6 - Personal Privacy

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